

I claim:

1           1.     A surgical apparatus, comprising:  
2                     a carrier movable between an unstressed state and a stressed  
3     state;  
4                     a tissue stimulation element supported on the carrier; and  
5                     a tissue engagement device associated with the carrier and  
6     configured to secure the carrier to tissue in the stressed state.

1           2.     A surgical apparatus as claimed in claim 1, wherein the carrier is  
2     configured to press the tissue stimulation element against the tissue when in  
3     the stressed state.

1           3.     A surgical apparatus as claimed in claim 1, wherein the carrier  
2     includes first and second end portions and an interior portion and the carrier is  
3     configured such that the interior portion will be in spaced relation to the tissue  
4     when the end portions are in contact with the tissue and the carrier is in the  
5     unstressed state.

1           4.     A surgical apparatus as claimed in claim 3, wherein the carrier  
2     interior portion is curved.

1           5.     A surgical apparatus as claimed in claim 3, wherein the tissue  
2     stimulation element comprises first and second tissue stimulation elements  
3     carried on the first and second end portions.

1           6.     A surgical apparatus as claimed in claim 5, wherein the carrier is  
2     configured to press the first and second tissue stimulation element against the  
3     tissue when in the stressed state.

1           7.     A surgical apparatus as claimed in claim 3, wherein the tissue  
2     engagement device is configured to hold the interior portion of the carrier  
3     substantially against the tissue.

1           8.     A surgical apparatus as claimed in claim 1, wherein the tissue  
2 engagement device comprises first and second tissue piercing members.

1           9.     A surgical apparatus as claimed in claim 1, wherein the tissue  
2 engagement device comprises a helical tissue piercing member.

1           10.    A surgical apparatus as claimed in claim 1, wherein the tissue  
2 engagement device comprises adhesive.

1           11.    A surgical apparatus as claimed in claim 1, wherein the tissue  
2 stimulation element comprises a stimulation electrode.

1           12.    A surgical apparatus as claimed in claim 1, wherein the tissue  
2 stimulation element comprises a pair of stimulation electrodes.

1           13.    A surgical apparatus for use with tissue, comprising:  
2               a tissue stimulation element; and  
3               means, associated with the tissue stimulation element, for  
4 securing the surgical apparatus to the tissue and pressing the stimulation  
5 element against the tissue.

1           14.    A surgical apparatus as claimed in claim 14, wherein the tissue  
2 stimulation element comprises a stimulation electrode.

1           15.    A surgical apparatus as claimed in claim 14, wherein the tissue  
2 stimulation element comprises a pair of stimulation electrodes.

1           16.    A surgical apparatus for use with tissue, comprising:  
2               a tissue stimulation element; and  
3               an anchor, associated with the tissue stimulation element,  
4 configured to secure the surgical apparatus to the tissue and press the  
5 stimulation element against the tissue.

1           17.    A surgical apparatus as claimed in claim 16, wherein the tissue  
2 stimulation element comprises a stimulation electrode.

1           18.    A surgical apparatus as claimed in claim 16, wherein the tissue  
2 stimulation element comprises a pair of stimulation electrodes.

1           19.    A surgical apparatus as claimed in claim 16, wherein the anchor  
2 includes a flexible carrier.

1           20.    A surgical apparatus as claimed in claim 19, the flexible carrier  
2 is non-linear when in a relaxed state.

1           21.    A surgical apparatus as claimed in claim 19, wherein the anchor  
2 includes a tissue piercing device associated with the flexible carrier.

1           22.    A surgical apparatus as claimed in claim 19, wherein the anchor  
2 includes adhesive associated with the flexible carrier.

1           23.    A surgical method, comprising the steps of:  
2                securing a self-anchoring stimulation and sensing device to  
3 tissue such that a tissue stimulation element is biased against the tissue; and  
4                performing one of a stimulation procedure and a sensing  
5 procedure with the tissue stimulation element.

1           24.    A surgical method as claimed in claim 23, wherein the step of  
2 securing a self-anchoring stimulation and sensing device comprises securing  
3 a self-anchoring stimulation and sensing device to myocardial tissue such that  
4 a tissue stimulation element is biased against the myocardial tissue.

1           25.    A surgical method as claimed in claim 23, wherein the step of  
2 securing a self-anchoring stimulation and sensing device comprises securing  
3 a self-anchoring stimulation and sensing device to myocardial tissue such that  
4 a tissue stimulation element is biased against the myocardial tissue on one  
5 side of a lesion.

1           26.    A surgical method as claimed in claim 25, further comprising the  
2 step of:  
3                monitoring myocardial tissue on the other side of the lesion.

1           27.    A surgical method as claimed in claim 25, wherein the self-  
2   anchoring stimulation and sensing device defines a first self-anchoring  
3   stimulation and sensing device, the method further comprising the steps of:  
4                securing a second self-anchoring stimulation and sensing device  
5   to tissue such that a tissue stimulation element is biased against myocardial  
6   tissue on the other side of the lesion; and  
7                monitoring the myocardial tissue on the other side of the lesion  
8   with the second self-anchoring stimulation and sensing device.

1           28.    A surgical system for use with tissue, comprising:  
2                a source of stimulation energy; and  
3                an apparatus, operably connected to the source of stimulation  
4   energy, including  
5                a tissue stimulation element, and  
6                an anchor, associated with the tissue stimulation element,  
7   configured to secure the surgical apparatus to the tissue and press the  
8   stimulation element against the tissue.

1           29.    A surgical system as claimed in claim 28, wherein the tissue  
2   stimulation element comprises a stimulation electrode.

1           30.    A surgical system as claimed in claim 28, wherein the tissue  
2   stimulation element comprises a pair of stimulation electrodes.